

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) A computerized method for ~~tracing the association of~~ tracking individual components consumed ~~in~~ during production of printed circuit board assemblies, the method comprising ~~steps of:~~

- (a) ~~receiving an indication of a failure of a first printed circuit board assembly, the first printed circuit board assemble having a first unique identification number~~ capturing a component identification of a selected component from a plurality of components, the component identification associated with an original equipment manufacturer's source identifier for the component;
- (b) ~~receiving an indication of a failed component of the first printed circuit board assembly, the failed component being a member of a plurality of substantially similar components that were used in the manufacture of a plurality of printed circuit board assemblies~~ capturing a unique board identification of a selected printed circuit board from a plurality of printed circuit boards;
- (c) ~~determining a second unique identification number of a second printed circuit board assembly that comprises a failed component of the plurality of substantially similar components~~ observing an attaching of the selected component to the selected printed circuit board; and
- (d) ~~communicating the second unique identification number to an entity associated with possession of the second printed circuit board assembly~~ determining a printed circuit board assembly identification associating the use of the selected component with the selected printed circuit board for subsequently tracking the selected component, and
- (e) identifying the selected printed circuit board from the determining step (d) in response to another circuit board comprising a component from the plurality of components and indicating a possible component failure.

2. (currently amended) The computerized method of claim 1, wherein the ~~receiving~~ capturing step (b) is performed before the ~~receiving~~ capturing step (a).

3. (currently amended) The computerized method of claim 1, wherein the plurality of ~~substantially similar~~ components ~~further comprise~~ comprises a reel of components.

4. (currently amended) The computerized method of claim 1, wherein the method further comprises ~~the steps of~~:

(e) determining ~~the~~ a causation of the failure of the ~~first other~~ printed circuit board assembly, the causation being associated with a source identifier selected from ~~the~~ a group consisting of a vendor of ~~the failed component, error and~~ a manufacturer error of the failed component, and a process of manufacturing the printed circuit board assembly.

5. (currently amended) The computerized method of claim 1, wherein the determining step ~~(e)~~ (d) further comprises:

~~(e)~~(d)(1) determining a plurality of ~~unique identification~~ printed circuit board assembly identifications ~~numbers of the members associated with a commensurate number of printed circuit boards~~ of the plurality of printed circuit boards ~~board assemblies, other than the failed printed circuit board assembly, that comprises a failed component of the plurality of substantially similar components; and~~

Wherein the ~~communicating step (d)~~ identifying step (e) further comprises:

~~(d)~~(e)(1) communicating the plurality of ~~unique identification numbers~~ printed circuit board assembly identifications to at least one entity associated with possession of the ~~second printed circuit board assembly~~ commensurate number of printed circuit boards.

6. (currently amended) The computerized method of claim ~~4~~5, wherein an entity associated with possession further comprises a downstream member of a marketing channel.

7. (currently amended) The computerized method of claim 1, ~~further comprising the steps of:~~

- ~~(e) capturing an identification of the plurality of substantially similar components;~~
- ~~(f) capturing the first unique identification number of the first printed circuit board assembly;~~
- ~~(g) associating the identification of the plurality of substantially similar components with the first unique identification number of the first printed circuit board assembly;~~
- ~~(h) capturing the second unique identification number of the second printed circuit board assembly; and~~
- ~~(i) associating the identification of the plurality of substantially similar components with the second unique identification number of the second printed circuit board assembly;~~

~~Wherein wherein~~ the capturing step ~~(f)~~ (a) and the capturing step ~~(g)~~ (b) and the determining step (d) are performed during a production of the first selected printed circuit board assembly and the associating step ~~(h)~~ and the capturing step ~~(i)~~ are identifying step (e) is performed during a production of the second other printed circuit board assembly.

8. (currently amended) The computerized method of claim ~~7,1~~ wherein the ~~identification of the plurality of substantially similar components further~~ source identifier comprises a trace code of the plurality of ~~substantially similar~~ components, a lot code of the plurality of ~~substantially similar~~ components, a vendor of the plurality of ~~substantially similar~~ components, a production date, a date after which the printed circuit board ~~assembly identification~~ is produced, and a date before which the printed circuit board ~~assembly identification~~ is produced.

9. (currently amended) The computerized method of claim ~~7,1~~ wherein the capturing step ~~(f)~~(a) further comprises a step of:

- ~~(f)~~(a)(1) scanning a bar code of a reel of components.

10. (currently amended) The computerized method of claim 7, ~~wherein the capturing step (f) is performed before the capturing step (g)~~ 1 wherein the other printed circuit board is produced after the selected printed circuit board.

11. (currently amended) A computerized apparatus for ~~tracing the association of tracking~~ components consumed ~~in~~ during production of printed circuit board assemblies, the apparatus comprising:

- a ~~first receiver of an indication of a failure of a first printed circuit board assembly, the first printed circuit board assembly having a first unique bar-coded identification number~~ capturer of a unique board identification of a selected printed circuit board from a plurality of printed circuit boards;
- a ~~second receiver of an indication of a failed component of the first printed circuit board assembly, the failed component being a member of a plurality of substantially similar components that were used in the manufacture of a plurality of printed circuit board assemblies, the second receiver operably coupled to the first receiver~~ capturer of a component identification of a selected component from a plurality of components, the component identification associated with an original equipment manufacturer's source identifier for the component;
- a ~~first determiner of a second unique bar-coded identification number of a second printed circuit board assembly that comprises a failed component of the plurality of substantially similar components, the first determiner operably coupled to the second receiver; and~~
- a ~~first communicator of the second unique bar-coded identification number to an entity associated with possession of the second printed circuit board assembly, the first communicator operably coupled to the first determiner~~ a determiner of a printed circuit board assembly identification associating the use of the selected component with the selected printed circuit board for subsequently tracking the selected component, and;
- an identifier of the selected printed circuit board responsive to the determiner and another printed circuit board comprising a component from the plurality of components and indicating a possible component failure.

12. (currently amended) The computerized apparatus of claim 11, wherein the plurality of ~~substantially similar~~ components ~~further~~ comprises a reel of components.

13. (currently amended) The computerized apparatus of claim 11, wherein the apparatus further comprises:

a second determiner of a causation of the failure of the ~~first~~ other printed circuit board assembly, the causation being associated with a source identifier selected from ~~the~~ a group consisting of a vendor of ~~the failed component, error and~~ a manufacturer error of that failed component, and a process of manufacturing the printed circuit board assembly, the second determiner operably coupled to the ~~first~~ determiner.

14. (cancelled)

15. (currently amended) The computerized apparatus of claim ~~14~~, 11 wherein the ~~identification of the plurality of substantially similar components further~~ source identifier comprises a trace code of the plurality of ~~substantially similar~~ components, a lot code of the plurality of ~~substantially similar~~ components, a vendor of the plurality of ~~substantially similar~~ components, a production date, a date after which the printed circuit board assembly ~~identification~~ is produced, and a date before which the printed circuit board assembly ~~bar-coded identification~~ is produced.

16. (currently amended) The computerized apparatus of claim ~~14~~, 11 wherein the ~~first~~ second capturer further comprises a scanner of a bar code of a reel of components.

17. (currently amended) The computerized apparatus of claim 11, wherein the first determiner ~~further comprises:~~

a ~~second determiner of~~ associates a plurality of ~~unique bar-coded identification numbers of the members of~~ printed circuit board assembly identifications commensurate with the plurality of printed circuit boards ~~board assemblies, other than the failed printed circuit board assembly, that comprises a failed component of the plurality of substantially similar components.~~

18. (currently amended) The computerized apparatus of claim 17, wherein an ~~entity associated with possession further comprises a downstream member of a marketing channel~~ the identifier communicates the plurality of printed circuit board assembly identifications to at least one entity associated with possession of the commensurate number of printed circuit boards.

19. (currently amended) The computerized apparatus of claim 11, wherein the ~~first communicator~~ identifier further comprises:

a ~~second communicator of the plurality of unique bar-coded identification numbers~~ printed circuit board assembly identifications to at least one entity associated with possession of the ~~second printed circuit board assembly~~ commensurate number of printed circuit boards.

20. (currently amended) A system for ~~associating tracing~~ tracking failed components in printed circuit board assemblies comprising:

a processor;

a storage device coupled to the processor;

~~software means operative on the processor for tracing the association of components consumed in production of a plurality of printed circuit board assemblies through a group of substantially similar components embodied on a reel; wherein the printed circuit boards are determined to be associated from a bar-coded identification code on each of the plurality of printed circuit board assemblies and from a bar-coded identification code on the group of substantially similar components embodied on a reel~~ determining a printed circuit board assembly identification associating the use of a selected component, from a plurality of components, with a selected printed circuit board, from a plurality of printed circuit boards, by capturing a component identification of the selected component associated with an original equipment manufacturer's source identifier, and by capturing a unique circuit board identification.